DISTRIBUTED SOURCE LEARNING FOR DATA COMMUNICATION SWITCH

ABSTRACT OF THE DISCLOSURE

5   A method and apparatus for accomplishing source learning in a data switch of the

type having a plurality of switching modules where each supports one or more external

network devices and a backplane interconnecting the switching modules. Each switching

module has logic resident thereon for performing distributed source learning, including

configuring unknown source addresses "seen" in inbound packets and for notifying the

10   other switching modules that such source addresses were "seen" on a port thereof.

Address-port associations are thereby configured on the switch using distributed logic,

i.e. without intervention by a centralized management entity. In regard to configuring

destination addresses--when a destination address is unknown, packets are delivered over

a multicast queue until the destination address is found. Once the destination address is

15   found, a method of flow integrity is used to avoid out of order packet delivery when the

device transitions from using a multicast flood queue to a unicast queue.